



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Xia, et al.

Serial No. 10/530,830

Filed: April 9, 2005

For: Assay Methods For State-Dependent Calcium Channel  
Agonists/AntagonistsArt Unit: 1651Examiner: FernandezCommissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR 1.97

Sir:

1. In compliance with 37 C.F.R. 1.97, submitted on the attached form herewith is a list of patents, publications or other information which are requested to be made of record in this application. This Information Disclosure Statement is not an admission that any patent, publication or other information referred to herein is "prior art" for this invention. In accordance with 37 C.F.R. 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the Statement is, or is considered to be, material to patentability as defined in 37 C.F.R. 1.56(b).
2. In accordance with 37 C.F.R. 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made.
3. Applicants respectfully request that the Examiner initial the attached form after reviewing the pertinence of each reference.
4. Pursuant to 37 C.F.R. 1.98 (a)(2)(ii), copies of each cited U.S. patent and each U.S. patent application publication are not enclosed herewith.

07/26/2007 HLE333 00000035 132755 10530830

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450, on the date appearing below.

MERCK &amp; CO., INC.

By Kenny E. You Date 7/24/2007

**INFORMATION DISCLOSURE STATEMENT**

5. Pursuant to 37 C.F.R. 1.98(d), copies of references listed on the attached form that were submitted to or cited by the Office in a related application upon which the instant application relies for an earlier filing date under 35 U.S.C. 120 are not enclosed. Related application(s) in which references were submitted to or cited by the Office are as follows:

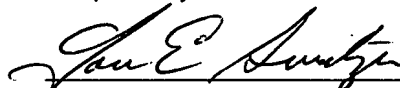
RELATED APPLICATION		
U. S. SERIAL NUMBER	FILING DATE	MERCK CASE

If this is inconvenient, additional copies will be submitted upon request.

6. In accordance with 37 C.F.R. 1.97, (check one)

- ☐ the attached information is filed within three months of the filing date of the captioned case.
- ☐ the attached information is filed more than three months after the filing date but prior to the mailing of a first Office Action on the merits.
- ☐ the attached information is filed before the mailing of a first Office action after the filing of a request for continued examination under §1.114.
- ☒ the attached information is being filed more than three months after the filing date and after the mailing of a first Office Action on the merits, but before the mailing date of a Final Action, Notice of Allowance, or an action that otherwise closes prosecution in the application. The enclosed authorization is therefore given to charge Deposit Account No. 13-2755 for the fee required under 37 C.F.R. 1.17(p).
- ☐ each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement.
- ☐ each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart application *and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of the information disclosure statement.*
- ☐ no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated under 37 C.F.R. 1.56(c) more than three months prior to the filing of this Statement.

Respectfully submitted,



By: Joan E. Switzer

Attorney \_\_\_\_\_ For Applicant(s)

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Date: July 24, 2007

## STATEMENT BY APPLICANT

JUL 26 2007

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of

3

**COMPLETE IF KNOWN****Application Number**

10/530,830

**Filing Date**

April 9, 2005

**First Named Inventor**

Xia, et al.

## Group Art Unit

1651

Examiner Name

Fernandez

Attorney Docket Number

21113P

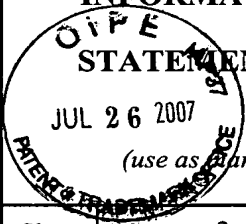
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Substitute for form 1449B/PTO <b>INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)			<b>COMPLETE IF KNOWN</b>		
			Application Number	10/530,830	
			Filing Date	April 9, 2005	
			First Named Inventor	Xia, et al.	
			Group Art Unit	1651	
			Examiner Name	Fernandez	
Sheet	2	of	3	Attorney Docket Number	21113P

NON PATENT LITERATURE DOCUMENTS		
Examiner Initials*	Cite No.	Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.
		Arikkath, et al., "Auxiliary subunits: essential components of the voltage-gated calcium channel complex," Current Opinion in Neurobiology, Vol. 13, 2003, pp. 298-307.
		Bean, et al., "Classes of Calcium Channels In Vertebrate Cells," Annu. Rev. Physiol., Vol. 51, 1989, pp. 367-384.
		Catterall, "Structure and Function of Voltage-Gated Ion Channels," TINS, Vol. 16, No. 12, 1993, pp. 500-506.
		Catterall, "Structure and Function of Voltage-Gated Ion Channels," Annu. Rev. Biochem., Vol. 64, 1995, pp. 493-531.
		Gonzalez, et al., "Voltage Sensing by Fluorescence Resonance Energy Transfer in Single Cells," Biophysical Journal, Vol. 69, October 1995, pp. 1272-1280.
		Gonzalez, et al., "Improved indicators of cell membrane potential that use fluorescence resonance energy transfer," Chemistry & Biology, Vol. 4, 1997, pp. 269-277.
		Hamill, et al., "Improved Patch-Clamp Techniques for High-Resolution Current Recording from Cells and Cell-Free Membrane Patches," Pflugers Archiv., Vol. 391, 1981, pp. 85-100.
		Hess, "Calcium Channels in Vertebrate Cells." Annu. Rev. Neurosci., Vol. 13, 1990, pp. 337-356.
		Hodgkin, et al., "Currents Carried By Sodium and Potassium Ions Through the Membrane of the Giant Axon of Loligo," J. Physiol., Vol. 116, 1952, pp. 449-472.
		Hondeghem, et al., "Antiarrhythmic Agents: The Modulated Receptor Mechanism of Action of Sodium and Calcium Channel-Blocking Drugs," Ann. Rev. Pharmacol. Toxicol., Vol. 24, 1984, pp. 387-423.
		Narahashi, et al., "Overview of Toxins and Drugs as Tools to Study Excitable Membrane Ion Channels: I. Voltage-Activated Channels," Meth. Enzymol., Vol. 207, 1992, pp. 620-643.
		Neher, "Molecular biology meets microelectronics," Nature Biotechnology, Vol. 19, February 2001, p. 114.
		Straub, et al., "Recombinant maxi-K channels on transistor, a prototype of iono-electronic interfacing," Nature Biotechnology, Vol. 19, February 2001, pp. 121-124.
		Strichartz, et al., "An Integrated View of the Molecular Toxinology of Sodium Channel Gating in Excitable Cells," Ann. Rev. Neurosci., Vol. 10, 1987, pp. 237-267.
		Velicelebi, et al., "Fluorescence Techniques for Measuring Ion Channel Activity," Physical Methods, Vol. 294, 1999, pp. 20-47.

Examiner Signature		Date Considered	
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\*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet

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**Application Number**

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**First Named Inventor**

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## Group Art Unit

1651

Examiner Name

Fernandez

Attorney Docket Number

21113P

Examiner  
Initials\*Cite  
No.

**Include name of the author, title, date, page(s), volume-issue number(s) and place of publication.**

Wang, et al., "KCNQ2 and KCNQ3 Potassium Channel Subunits: Molecular Correlates of the M-Channel," *Science*, Vol. 282, December 1998, pp. 1890-1893.

Wu, et al., "Pharmacological Roles of the Large Conductance Calcium-Activated Potassium Channel," *Current Topics in Med. Chem.*, Vol. 6, 2006, pp. 1025-1030.

Zheng, et al., "Pharmacologic and Radioligand Binding Studies of 1,4-Dihydropyridines in Rat Cardiac and Vascular Preparations: Stereoselectivity and Voltage Dependence of Antagonist and Activator Interactions," *Molecular Pharmacology*, Vol. 41, 1991, pp. 535-541.

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